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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/825,668

04/16/2004

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EXAMINER

CHEN, YI

ART UNIT

PAPER NUMBER

4152

MAIL DATE

DELIVERY MODE

03/18/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/825,668 | <b>Applicant(s)</b><br>JUNG ET AL. |  |
|                              | <b>Examiner</b><br>YI CHEN           | <b>Art Unit</b><br>4152            |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/30/2007, 09/08/2006</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Claims 1-53 are pending in this application.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-25 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter.

Claims 2-12 and 14-25 in view of not being embodied on a tangible media lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Regarding claims 1 and 13, since the claim recites a computer readable medium and the instant specification has not clearly defined the limitation as one of tangible types of media, "***it appears***", the claim can be read as a signal and is therefore, deemed non-statutory, based on current case law and 101 guidelines.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d

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at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

### ***Drawings***

4. Figure 12 is the same as Figure 11. The steps 301-312 are missing in the drawing. Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6. Claims 1-11, 13-24, 26-29 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick, (US 6,021,429), in view of Holloway et al.,(US 5,905,859, hereinafter Holloway).**

7. Regarding claim 1, Danknick discloses a network device, comprising:

a message receiving module operable to receive notify messages transmitted from controlled devices connected in a network, (col. 2, lines 1-10);

a device list management module operable to collect information on the controlled devices connected in the network and create and manage a list of service information of all the controlled devices connected in the network, (col. 2, lines 1-10; col. 3, lines 20-25); and

Danknick doesn't disclose a control module operable to search for service information of a specific controlled device, which has been requested by a control point, in the device list management module and transmit the searched information.

Holloway discloses a control module operable to search for service information of a specific controlled device, which has been requested by a control point, (steps 401-403, fig. 14, col. 14, lines 20-30), in the device list management module and transmit the searched information, (steps 403-405, col. 14, lines 11-35).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and the teachings of Holloway to create a system which can search a specific device from the list in the device.

8. Regarding claim 13, Danknick discloses a network system, comprising:

a control point operable to transmit discovery packets to search for devices existing in a network, (step 507, fig. 5b, col. 9, lines 60-67), receive response messages thereto ,(steps 508-511, fig. 5b, col. 9, lines 64-67; col. 10, lines 1-24), and control the devices existing in the network, (col. 1, lines 55-60); and

controlled devices, each of which receives notify messages transmitted from other controlled devices connected in the network ,(steps 508-511, fig. 5b, col. 9, lines 64-67; col. 10, lines 1-24), generates and manages a list of information on all controlled devices connected in the network, (col.1, lines 55-67); and

Danknick doesn't disclose searching and transmitting information on a controlled device requested by the control point.

Holloway discloses searching and transmitting information on a controlled device requested by the control point, (steps 401-403, fig. 14, col. 14, lines 20-30).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and the teachings of Holloway to create a system which can search a specific device from the list in the device.

9. Regarding claim 26, Danknick discloses a method of providing a list of controlled devices, comprising:

receiving notify messages from controlled devices connected in a network, (col. 2, lines 1-10);

collecting information regarding the controlled devices connected in the network through the received notify messages and generating the list of controlled devices, (col. 2, lines 1-10; col. 3, lines 20-25);

receiving an information request message for a specific controlled device, (step 519, fig. 5b, col. 11, lines 23-29);

Danknick doesn't disclose searching for information regarding the specific controlled device for which the information request message is received, in the generated list; and transmitting the information regarding the searched specific controlled device.

Holloway discloses searching for information regarding the specific controlled device for which the information request message is received, in the generated list, (steps 401-403, fig. 14, col. 14, lines 20-30); and

transmitting the information regarding the searched specific controlled device, (steps 403-405, col. 14, lines 11-35).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and the teachings of Holloway to create a system which can search a specific device from the list in the device.

10. Regrading claim 40, Danknick discloses a method of providing a list of controlled devices, comprising:

receiving, in a controlled device, notify messages from other controlled devices connected in a network, (col. 2, lines 1-10);

collecting information on the controlled devices connected in the network through the received notify messages and generating the list of controlled devices, (col. 2, lines 1-10; col. 3, lines 20-25);

Danknick doesn't disclose requesting, by a control point, information on a specific controlled device; searching for, by the controlled device, the information regarding the specific controlled device requested by the control point, in the generated list; and transmitting the information on the searched specific controlled device.

Holloway discloses requesting, by a control point, information on a specific controlled device, (steps 401-403, fig. 14, col. 14, lines 20-30);

searching for, by the controlled device, the information regarding the specific controlled device requested by the control point, in the generated list, (steps 401-403, fig. 14, col. 14, lines 20-30); and

transmitting the information on the searched specific controlled device, (steps 403-405, col. 14, lines 11-35).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and the teachings of Holloway to create a system which can search a specific device from the list in the device.



11. Regarding claims 2 and 15, the claim is rejected for the same reasons as claim 1 above, in addition, Holloway discloses the message receiving module receives a search message transmitted from the control point, (step 400, fig. 14, col. 14, lines 20-21).

12. Regarding claims 3 and 16, Danknick discloses a token management module operable to generate a token, (identifier or command, col. 11, line 20), transfer the generated token to another controlled device and manage the token, (col.11, lines 12-35).

13. Regarding claims 4 and 17, Danknick discloses the control module responds to an information request message from the control point, ("the request from the other network device", col. 9, lines 67), by checking whether the token is present in the controlled devices, (when the device is in active state (the token is present), it transmits an identification signal over the LAN, col. 10, lines 1-9).

14. Regarding claims 5 and 18, Danknick discloses the check of the presence of the token is performed using state information of the controlled devices, (when NEB2 is in active state (list manager), it can identify itself by sending the identification signal (token) over the LAN, col. 10, lines 1-9)

15. Regarding claims 6 and 19, Danknick discloses the state information is any one of an initial state, an active state and a stop state, (when NEB2 is in active state (list

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manager), it can identify itself by sending the identification signal (token) over the LAN, col. 10, lines 1-9).

16. Regarding claims 7 and 20, Danknick discloses a timer management module operable to create a self-timer, (step 512, fig. 5B), wherein when a token managed by a token management module is transferred to another controlled device and the self-timer checks a response time of the other controlled device to which the token is transferred, (col. 10, lines 35-45).

17. Regarding claims 8 and 21, Danknick discloses the timer management module creates a waiting timer, (step 512, fig. 5b), and the waiting timer checks a total circulation time of the token for controlled devices existing in the network, ("check the state of the devices, col. 10, lines 25-45).

18. Regarding claims 9 and 22, Danknick discloses a negotiation module operable to control the validity of each token when a plurality of tokens are present in the controlled devices, (two potential list managers, fig. 5b, col. 11, lines 14-20), existing in the network, (first list manager identifies whether its valid list manager (validity of its token) by comparing the numbers of devices address in the lists of devices stored in respective devices, col. 11, lines 12-35).

19. Regarding claims 10 and 23, Danknick discloses the negotiation module determines whether the plurality of tokens are present by using state information of each controlled device, (first list manager is in active state (steps 507-514, 520-521, fig. 5b) and second list manger is also in active state (step 516-517, fig. 5b)).

20. Regarding claims 11 and 24, Danknick discloses the negotiation module is operable to control the validity of each token by comparing the numbers of controlled devices in lists of controlled devices stored in respective controlled devices having the tokens, (first list manager identifies whether its valid list manager (validity of its token) by comparing the numbers of devices address in the lists of devices stored in respective devices, col. 11, lines 12-35).

21. Regarding claim 14, Danknick discloses each controlled device comprises:  
a message receiving module operable to receive notify messages transmitted from controlled devices connected in a network, (col. 2, lines 1-10);  
a device list management module operable to collect information on the controlled devices connected in the network and create and manage a list of service information of all the controlled devices connected in the network, (col. 2, lines 1-10; col. 3, lines 20-25); and

Danknick doesn't discloses a control module operable to search for service information of a specific controlled device, which has been requested by a control point, in the device list management module and transmit the searched information.

Holloway discloses a control module operable to search for service information of a specific controlled device, which has been requested by a control point, (steps 401-403, fig. 14, col. 14, lines 20-30), in the device list management module and transmit the searched information, (steps 403-405, col. 14, lines 11-35).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and the teachings of Holloway to create a system which can search a specific device from the list in the device.

22. Regarding claims 27 and 41, Danknick discloses generating a token, (identifier or command, col. 11, line 20), by each controlled device, (col. 11, lines 12-35).

23. Regarding claims 28 and 42, Danknick discloses the searching is performed when the token is present in the controlled device as a result of checking whether the token is present in the controlled device, (when the device is in active state (the token is present), it transmits an identification signal over the LAN, col. 10, lines 1-9).

24. Regarding claims 29 and 43, Danknick discloses transferring the token to another controlled device, (col. 11, lines 12-35).

**25. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick and Holloway as applied to claims 1,9,11, 13, 16, 22 and 24, in view of Tock et al.,(US 7,146,403 B2 hereinafter Tock).**

26. Regarding claims 12 and 25, Danknick and Holloway do not disclose if the compared numbers of controlled devices in the lists held by the respective controlled devices are the same, the negotiation module controls the validity of each token by comparing the sums of network remaining duration times of the respective controlled devices registered in the lists.

Tock disclose the negotiation module controls the validity of each token by comparing the sums of network remaining duration times of the respective controlled devices registered in the lists, (col. 26, lines 10-22)

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and Holloway with the teachings of Tock to create a system which can decide which device should be in the active state.

**27. Claims 30, 32-34, 37-38, 44, 46-48 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick and Holloway as applied to claims 26-27, 29, 40-41 and 43, in view of Tonelli et al.,(US 5,821,937 B2 hereinafter Tonelli).**

28. Regarding claims 30 and 44, Danknick discloses the token transferring further comprises:

checking, by the controlled device, the number of controlled devices in the list of controlled devices stored in a device list management module of the controlled device, (col. 11, lines 13-15);

if it is determined that the number of controlled devices in the list is more than 2, (higher device address, step 517), transferring the token, (identifier or command, col. 11, line 20), to another controlled device, (col.11, lines 12-35).

checking whether a response message is received from the other controlled device, (step 508, fig. 5b, col. 9, lines 64-67), and operating a self-timer of the controlled device, (step 514, fig. 5b), and

if the response message is received from the other controlled device, stopping the self-timer, (time elapsed, step 514, fig. 5b), and operating a waiting timer of the controlled device, (step 512, fig. 5b)

Danknick and Holloway do not disclose transferring the stored list of controlled devices to another controlled device;

Tonelli discloses transferring the stored list of controlled devices to another controlled device, (col. 15, lines 60-67; col. 16, lines 1-4);

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and Holloway and the teaching of Tonelli to create a system can transfer the list of devices to other device base on their token, (identifier or command, col. 11, line 20).

29. Regarding claims 32 and 46, Danknick discloses determines a response time of the other controlled device to which the token is transferred, (step 514, col. 11, lines 53-58).

30. Regarding claims 33 and 47, Danknick discloses the waiting timer determines the total circulation time of the token for controlled devices existing in the network, ("check the state of the devices, col. 10, lines 25-45).

31. Regarding claims 34 and 48, Danknick discloses if a token is not received from other controlled devices even after the operation of the waiting timer is completed, automatically generating a token, ("create an indicator", col. 10, lines 40-45).

32. Regarding claims 37 and 51, Danknick discloses if a plurality of tokens are present in controlled devices, (two potential list managers, fig. 5b, col.11, lines 14-20), existing in the network, performing negotiation for controlling the validity of each token, (first list manager identifies whether its valid list manager (validity of its token) by comparing the numbers of devices address in the lists of devices stored in respective devices, col. 11, lines 12-35).

33. Regarding claims 38 and 52, Danknick discloses the negotiation comprises:  
controlling the validity of each token by comparing the numbers of controlled devices in lists of controlled devices held by the respective controlled devices having

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the tokens, (first list manager identifies whether its valid list manager (validity of its token) by comparing the numbers of devices address in the lists of devices stored in respective devices, col. 11, lines 12-35).

**34. Claims 31 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick, Holloway and Tonelli as applied to claims 26-27, 29-30, 40-41 and 43-44, in view of Goshey et al.,(US 6,473,783 B2 hereinafter Goshey).**

35. Regarding claims 31 and 45, Danknick, Holloway and Tonelli do not disclose the list transferring comprises modifying the list of controlled devices so the controlled device which has transferred the list becomes the last in the list, and identifying a controlled device, which has recorded as the first in the modified list, as a controlled device to which the list will be transferred.

Goshey discloses the list transferring comprises modifying the list of controlled devices so the controlled device which has transferred the list becomes the last in the list, and identifying a controlled device, which has recorded as the first in the modified list, as a controlled device to which the list will be transferred, (col. 12, lines 65-67). It would have been obvious to one skilled in the art at the time of the invention to realize that Goshey can also modify the list by putting the first device on the bottom of the list and the second device on the top of the list.



It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and Tonelli with the teachings of Goshey because the user can choose the devices based on the arrangement of the list.

**36. Claims 35-36 and 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick, Holloway and Tonelli as applied to claims 26-27, 29-30, 40-41 and 43-44, in view of Barilovits,(US 7,130,582 B2).**

37. Regarding claims 35 and 49, Danknick and Tonelli do not disclose if the response message is not received from the other controlled device: deleting, by the controlled device, the other controlled device, which has not transmitted the response message, from the list of controlled devices stored in the device list management module; and notifying, by the controlled device, a control point that the controlled device, which has not transmitted the response message, does not exist in the network.

Barilovits discloses if the response message is not received from the other controlled device:

deleting, by the controlled device, the other controlled device, which has not transmitted the response message, from the list of controlled devices stored in the device list management module, (col. 5, lines 40-50); and

notifying, by the controlled device, a control point that the controlled device, which has not transmitted the response message, does not exist in the network, (col. 45-50);

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and Tonelli with the teachings of Barilovits to create a system which can response when the device is removed from the network.

38. Regarding claims 36 and 50, Danknick discloses if the response message is not received from the other controlled device, (after the step 516, go back to steps 507-509, fig. 5b), transferring the token to a further controlled device by the controlled device, (col. 11, lines 12-35).

**39. Claims 39 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick, Holloway and Tonelli as applied to claims 26-27, 29-30, 37-38, 40-41, 43-44, 46 and 51-52, in view of Tock.**

40. Regarding claims 39 and 53, Danknick, Holloyway and Tonelli do not disclose if the numbers of controlled devices in the lists of controlled devices are the same as a result of the comparison, controlling the validity of each token by comparing the sums of network remaining duration times of the respective controlled devices registered in the lists.

Tock disclose if the numbers of controlled devices in the lists of controlled devices are the same as a result of the comparison, controlling the validity of each token by comparing the sums of network remaining duration times of the respective controlled devices registered in the lists, (col. 26, lines 10-22)

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Danknick and Holloway with the teachings of Tock to create a system that can decide which device should be in the active state.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YI CHEN whose telephone number is (571)270-3805. The examiner can normally be reached on 7:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil Elhady can be reached on 571-272-3963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vincent F. Boccio/  
Primary Examiner, Art Unit 2165

Yi Chen  
3/12/2008